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Perspectives at the future accelerator facility FAIR

J. Stroth

Inst. für Kernphysik, Johann Wolfgang Goethe University, 60438 Frankfurt, Germany

The future Facility for Antiproton and Ion Research (FAIR) in Darmstadt will provide ideal conditions for a diverse research programme addressing various aspects of strongly interacting systems, fundamental interactions and dense plasmas. The projected complex combines two new synchrotrons with various storage rings, foresees cooling of beams and permits fixed target as well as in-beam experiments. This presentation will focus on the future research activities at FAIR, which can be grouped into 5 research areas: the structure and reactions of rare isotopes, hadron physics with brilliant antiproton beams, nuclear matter at high densities, atomic physics of antimatter and in strong electromagnetic fields, and laser as well as ion induced plasma physics. Emphasis will be put on the experimental installations addressing nuclear physics with relevance for astrophysics.